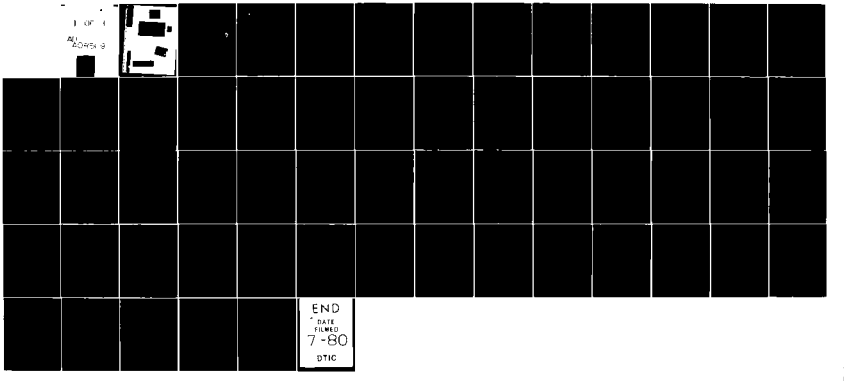
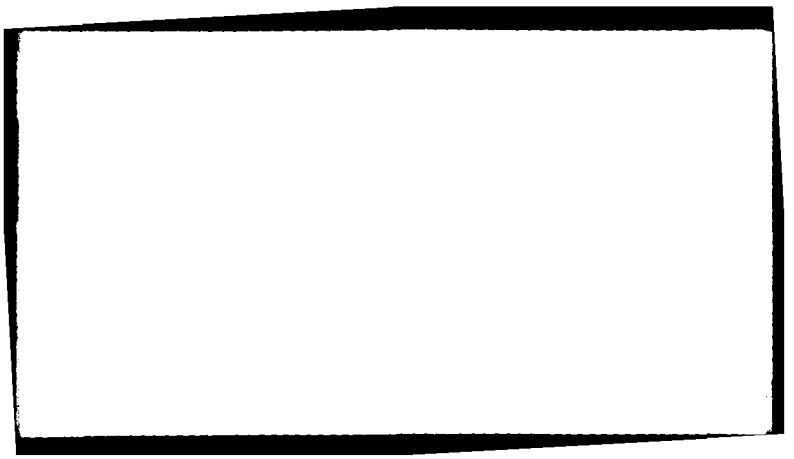
AD-A085 691 TECHNOMICS INC OAKTON VA F/G 5/9
A SYSTEM APPROACH TO NAVY MEDICAL EDUCATION AND TRAINING, APPEN--ETC(U)
AUG 74 N00014-69-C-0286
UNCLASSIFIED NL



END
DATE FILMED
7-80
DTIC



APPENDIX 15.

BIOTRONICS TECHNICIANS

APPLICATION OF A SYSTEM APPROACH
U.S. NAVY MEDICAL DEPARTMENT
EDUCATION AND TRAINING PROGRAMS
FINAL REPORT

Prepared under Contract to
OFFICE OF NAVAL RESEARCH
U.S. DEPARTMENT OF THE NAVY

Quida C. Upchurch, Capt., NC, USN
Program Manager
Education and Training R&D
Bureau of Medicine and Surgery (Code 71G)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER: Final Report (Vols. I & II) Appendix: [redacted] 15	2. GOVT ACCESSION NO. AD-A085 691
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle) (6) A System Approach to Navy Medical Education and Training. Appendix 15. Education and Training	5. TYPE OF REPORT & PERIOD COVERED (9) FINAL REPORT.
6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(s) (11) 31 Aug 74	8. CONTRACT OR GRANT NUMBER(s) (15) N00014-69-C-0246
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Office of Naval Research, Department of the Navy, Arlington, Virginia 22217 (12) 259	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: 43-03X.02
11. CONTROLLING OFFICE NAME AND ADDRESS: Office of Naval Research, Department of the Navy, Arlington, Virginia 22217	12. REPORT DATE: 31-8-74
	13. NUMBER OF PAGES
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office): Office of Naval Research, Department of the Navy, Arlington, Virginia 22217	15. SECURITY CLASS. (of this report): UNCLASSIFIED
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

Approved for public release; distribution unlimited.

18. SUPPLEMENTARY NOTES

None

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Education and Training
Medical Training
Nurse Training
Dentist Training
Medical Technician
Job Analysis
Task Analysis
Curriculum Development

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The study objective consisted of a determination of what the health care personnel in the Navy's Medical Department, Bureau of Medicine and Surgery actually do in their occupations; improving the personnel process (education and training); and building a viable career pathway for all health care personnel. Clearly the first task was to develop a system of job analyses applicable to all system wide health care manpower tasks. A means of postulating simplified occupational clusters covering some 50

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE S/N 0102-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

388 930

16

currently designated Navy enlisted occupations, 20 Naval Enlisted Classification Codes (NEC's) were computerized. A set of 16 groupings that cover all designated occupations was developed so as to enhance the effectiveness of professionals and sub-professionals alike.

FOREWORD

The project, "Application of a System Approach to the Navy Medical Department Education and Training Programs," was initiated in May of 1969 as a realistic, comprehensive response to certain objectives set forth in ADO 43-03X, and to memoranda from both the Secretary of Defense and the Assistant Secretary of Defense, Manpower and Reserve Affairs. The Secretary's concern was stated in his memorandum of 29 June 1965, "Innovation in Defense Training and Education." More specific concerns were stated in the Assistant Secretary's memorandum of 14 June 1968, "Application of a System Approach in the Development and Management of Training Courses." In this he called for "vigorous and imaginative effort," and an approach "characterized by an organized training program with precise goals and defined operational interrelation among instructional system components." He also noted, "Job analyses with task descriptions expressed in behavioristic terms are basic and essential to the development of precise training goals and learning objectives."

The Project

System survey and analysis was conducted relative to all factors affecting education and training programs. Subsequently, a job-analysis sub-system was defined and developed incorporating a series of task inventories "...expressed in behavioristic terms..." These inventories enabled the gathering of job activity data from enlisted job incumbents, and data relating to task sharing and delegation from officers of the Medical, Nurse and Dental Corps. A data management sub-system was devised to process incumbent data, then carry out needed analyses. The development of initial competency curricula based upon job analysis was implemented to a level of methodology determination. These methods and curriculum materials constituted a third (instructional) sub-system.

Thus, as originally proposed, a system capability has been developed in fulfillment of expressed need. The system, however, remains untested and unevaluated. ADO 43-03X called for feasibility tests and cost-effectiveness determination. The project was designed to so comply. Test and evaluation through the process of implementation has not proved feasible in the Navy Medical Department within the duration of the project. As designed and developed the system does have "...precise goals and defined operational interrelation among instructional system components." The latter has been achieved in terms of a recommended career structure affording productive, rewarding manpower utilization which bridges manpower training and health care delivery functions.

Data Management Sub-System

Job analysis, involving the application of comprehensive task inventories to thousands of job incumbents, generates many millions of discrete bits of response data. They can be processed and manipulated only by high speed computer capability using rigorously designed specialty programs. In addition to numerical data base handling, there is the problem of rapidly and accurately manipulating a task statement data base exceeding ten thousand carefully phrased behavioral statements. Through the use of special programs, task inventories are prepared, printouts for special purposes are created following a job analysis application, access and retrieval of both data and tasks are efficiently and accurately carried out, and special data analyses conducted. The collective programs, techniques and procedures comprising this sub-system are referred to as the Navy Occupational Data Analysis Language (NODAL).

Job Analysis Sub-System

Some twenty task inventory booklets (and associated response booklets) were the instruments used to obtain job incumbent response data for more than fifty occupations. An inventory booklet contains instructions, formatted questions concerning respondent information ("bio-data"), response dimension definitions, and a list of tasks which may vary in number from a few hundred to more than a thousand per occupational field.

By applying NODAL and its associated indexing techniques, it is possible to assemble modified or completely different inventories than those used in this research. Present inventories were applied about three years ago. While they have been rendered in operational format, they should not be re-applied until their task content is updated.

Response booklets were designed in OPSCAN mode for ease of recording and processing responses.

Overall job analysis objectives and a plan of administration were established prior to inventory preparation, including the setting of provisional sample target sizes. Since overall data attrition was forecast to approximate twenty percent, final sample and sub-sample sizes were adjusted accordingly. Stratified random sampling techniques were used. Variables selected (such as rating, NEC, environment) determined stratifications, together with sub-population sizes. About fifteen percent of large sub-populations were sought while a majority or all members of small sub-populations were sought.

Administration procedures were established with great care for every step of the data collecting process, and were coordinated with sampling and data analysis plans. Once set, the procedures were formalized as a protocol and followed rigorously.

Instructional Sub-System

Partial "competency curricula" have been composed as an integral sub-system bridging what is required as performance on the job with what is, accordingly, necessary instruction in the training process. Further, curriculum materials were developed to meet essential requirements for implementing the system so that the system could be tested and evaluated for cost effectiveness. However, due to the fact that test and evaluation was not feasible in the Navy Medical Department within the duration of the project, it was not possible to complete the development of the system through the test and evaluation phase. The inability to complete this phase also interrupted the planned process for fully developing the curricula; therefore, instead of completed curricula ready for use in the system, the curricula were partially developed to establish the necessary sub-system methodology. The competency curricula are based on tasks currently performed by job incumbents in 1971. (The currency of a given curriculum depends upon periodic analysis of incumbents' jobs, and its quality control resides in the evaluation of the performance competency of the program's graduates.)

A competency curriculum provides a planned course of instruction or training program made up of sequenced competency units which are, in turn, comprised of sequenced modules. These modules, emphasizing performance objectives, are the foundation of the curriculum.

A complete module would be comprised of seven parts: a cluster of related tasks; a performance objective; a list of knowledges and skills implied by the objective; a list of instructional strategies for presenting the knowledges and skills to the learner; an inventory of training aids for supporting the instructional strategies; a list of examination modes; and a statement of the required training time. In this project, curriculum materials have been developed to various levels of adequacy, and usually comprise only the first three parts; the latter four need to be prepared by the user.

The performance objective, which is the most crucial part of the module, is the basis for determining curriculum content. It is composed of five essential elements: the stimulus which initiates the behavior; the behavior; the conditions under which the behavior takes place; the criteria for evaluating the behavior; and the consequence or results of the behavior. A sixth element, namely next action, is not essential; however, it is intended to provide linkage for the next behavior.

Knowledges and skills listed in the module are those needed by the learner for meeting the requirements of the performance objective.

Instructional strategies, training aids, examination modes and training time have been specified only for the Basic Hospital Corps Curriculum. The strategies, aids and modes were selected on the basis of those considered to be most supportive in presenting the knowledges and skills so as to provide optimum learning effectiveness and training efficiency. The strategies extend from the classroom lecture as traditionally presented by a teacher to the more sophisticated mediated program for self-instruction. The training aids, like strategies, extend from the traditional references and handout material in the form of a student syllabus to mediated programs for self-instruction supported by anatomical models. Examination modes extend from the traditional paper and pencil tests to proficiency evaluation of program graduates on the job, commonly known as feedback. Feedback is essential for determining learning effectiveness and for quality control of a training program. The kind of instructional strategies, training aids and examination modes utilized for training are limited only by such factors as staff capability and training budget.

The training time specified in the Basic Hospital Corps Curriculum is estimated, based upon essential knowledge and skills and program sequence.

The competency curriculum module, when complete, provides all of the requirements for training a learner to perform the tasks set forth in the module. A module may be used independently or related modules may be re-sequenced into modified competency units to provide training for a specific job segment.

Since the curricula are based upon tasks performed by job incumbents in 1971, current analysis of jobs needs to be accomplished using task inventories that have been updated to reflect changes in performed tasks. Subsequent to job analysis, a revision of the curricula should be accomplished to reflect task changes. When the foregoing are accomplished, then faculty and other staff members may be indoctrinated to the competency curricula and to their relationship to the education and training system.

In addition to the primary use for the systematic training of job incumbents, these curricula may be used to plan for new training programs, develop new curricula, and revise existing curricula; develop or modify performance standards; develop or modify proficiency examinations; define billets; credentialize training programs; counsel on careers; select students; and identify and select faculty.

The System

Three sub-systems, as described, comprise the proposed system for Education and Training Programs in The Navy Medical Department. This exploratory and advanced developmental research has established an overall methodology for improved education and training incorporating every possible means of providing bases for demonstrating feasibility and cost effectiveness. There remains only job analysis sub-system updating, instructional sub-system completion, and full system test and evaluation.

Acknowledgements

The authors wish to acknowledge the invaluable participation of the several thousands of Naval personnel who served as respondents in inventory application. The many military and civilian personnel who contributed to developmental efforts are cited by name in the Final Report.

The authors also wish to acknowledge former colleagues for singularly important contributions, namely, Elias H. Porter, Ph.D., Carole K. Kauffman, R.N., M.P.H., Mary Kay Munday, B.S.N., R.N., Gail Zarren, M.S.W., and Renee Schick, B.A.

Identity and acknowledgement of the project Advisory Group during the project's final year is recorded in the Final Report.

Lastly, the project could not have been commenced nor carried out without the vision, guidance and outstanding direction of Ouida C. Upchurch, Capt., NC, USN, Project Manager.

NAVY MEDICAL DEPARTMENT

TASK INVENTORY BOOKLET

BIOTRONICS

CONSTRAINTS AND ETHICAL USE

This task inventory was developed three years ago in a first-version key punch format for education and training research purposes.

The present "operational" format, using a mark-sense response booklet (Opscan), is recommended for future applications. The task and equipment statements comprising the bulk of the inventory are precisely the same (less duplicate entries) as in the original research tools but rearranged for Opscan mode. Biographical data questions have also been reformatted for Opscan (NEC codes should be updated).

The processing, administering and formatting of this inventory have thus been readied for operational application.

It is strongly recommended that this inventory be updated in its task and equipment statement sections before actual operational use. These reasons pertain:

- Changes in medical or related procedures or techniques
- Some tasks may violate current policy or be obsolete
- Equipment changes may have occurred
- The objective of task comprehensiveness may change
- Objectives may shift to embrace manpower utilization as well as education and training

In the latter regard, the present operational format includes a "time to perform" dimension (as well as frequency of performance and two additional optional blank response dimension fields). As a response dimension, "time to perform" has been validated within the context of inventories for professional personnel where the objectives embraced utilization (i.e., time associated with shared and delegable tasks). The original Enlisted inventory content was directed to education and training factors only. If "time to perform" is to be used operationally, each task and equipment statement should be examined by expert job incumbents to remove possible overlaps which could confound "time to perform" data. This review process would also serve other purposes cited above.

A general precaution is in order.

When task analysis inventories are poorly prepared, loosely administered, administered according to less than rigorous sampling, or are handled casually in processing or interpretation, they will inevitably produce poor or questionable data, at best. At worst, such practices will result in loss of money and time, and produce dangerous data. Inventories should be prepared, applied, processed and interpreted only by knowledgeable professional and technical personnel. As in the cases of ethically controlled behavior tests, inventories should not be casually copied or distributed, and should remain under the control of authorized, trained personnel. Factors effecting reliability and validity should be fully appreciated.

GENERAL INSTRUCTIONS

There are two parts to be completed for this survey:

Part I	Career Background Information (answers to be recorded in this TASK BOOKLET)
Part II A	List of Tasks (answers to be recorded on the accompanying RESPONSE BOOKLET)
B	List of Instruments and Equipment (answers to be recorded on the accompanying RESPONSE BOOKLET)

Each part is preceded by a set of instructions. Be sure to read them carefully before you start answering each part. All instructions are found on the tinted pages.

PLEASE USE ONLY NUMBER 2 LEAD PENCILS. ERASE ALL CHANGES CAREFULLY AND COMPLETELY. DO NOT PUT ANY MARKS OTHER THAN YOUR ANSWERS ON EACH RESPONSE PAGE.

DO NOT FOLD, WRINKLE, CREASE OR DETACH PAGES FROM EITHER TASK BOOKLET OR RESPONSE BOOKLET.

WHEN RECORDING YOUR ANSWERS YOU MAY WANT TO USE A RULER TO READ ACROSS ANSWER AND QUESTION COLUMNS.

WHEN YOU HAVE COMPLETED YOUR RESPONSES, PUT THE TASK INVENTORY BOOKLET AND THE RESPONSE BOOKLET IN THE ENCLOSED SELF-ADDRESSED ENVELOPE. SEAL AND RETURN TO THE OFFICER WHO GAVE YOU THIS PACKAGE. COMPLETED BOOKLETS SHOULD BE RETURNED WITHIN ONE WEEK OF RECEIPT.

DO NOT FILL IN

_ _ _ _ _ _ _ (1)

N___ _____ (7)
Form Serial No.

Part I

CAREER BACKGROUND INFORMATION

Check that the Form and Serial Number in this box match those on the cover of this Booklet _____

Please fill out completely

Name of your Duty Station _____

City & State (if applicable) _____

Your Name _____

Social Security Number _ _ _ _ _ _ _ _ _ (14)

PLEASE ANSWER QUESTIONS BELOW BY ENTERING THE PROPER NUMBER IN THE BLANKS PROVIDED. TWO BLANKS REQUIRE A TWO-DIGIT ANSWER. DISREGARD NUMBERS IN PARENTHESIS.

ENTER ANSWERS HERE

Q1. Select the number to indicate the Corps to which you belong: Q1.__ (23)

1. Dental Technician
2. Hospital Corps

Q2. Indicate your military status: Q2.__ (24)

1. USN
2. USNR

Q3. Indicate your pay grade: Q3.__ (25)

1. E1
2. E2
3. E3
4. E4
5. E5
6. E6
7. E7
8. E8
9. E9

Q4. Indicate your total years of active duty in the Navy to date: (estimate to the nearest year) Q4.__ (26)

1. Less than 2 years
2. 2 to 4 years
3. 5 to 8 years
4. More than 8 years

	ENTER ANSWERS HERE	
Q5. Select the number to indicate your present immediate supervisor: 1. Physician 2. Dentist 3. Nurse 4. MSC Officer 5. HM or DT 6. Other (Specify) _____	Q5.__	(27)
Q6. Select the number to indicate the average number of hours you work per week: (estimate to the nearest hour) 1. 35 to 40 hours 2. 41 to 50 hours 3. More than 50 hours	Q6.__	(28)
Q7. Please give an estimate of the percent of time you spend on the following (write five percent as 05): 1. Inpatient care 2. Outpatient care 3. Teaching 4. Administration 5. Other (specify) _____	Q7. 1.__ __% 2.__ __% 3.__ __% 4.__ __% 5.__ __%	 (29) (31) (33) (35) (37)
Q8. Assuming that most or all of the following factors are of importance to you, select the three which, if improved, would contribute most to your job satisfaction: 01 Salary and/or promotion opportunities 02 Retirement benefits 03 Housing 04 Educational advancement opportunities 05 Stability of tour of duty 06 Physical facilities and equipment 07 Administrative and clerical support 08 Work load 09 Personal career planning 10 Opportunity to attend professional meetings	Q8.__ __ __ __ __ __	(39) (41) (43)

ENTER ANSWERS HERE

Q9. Using the list on page vii specify your current NEC by writing the last two digits of the CODE. — Q9.__ __ (45)

Q10. Select the number to indicate your years of experience corresponding to the NEC stated in Q9: (estimate to the nearest year) — Q10.__ __ (47)

1. Less than 1 year
2. 1 to 2 years
3. 3 to 5 years
4. 6 to 10 years
5. 11 to 15 years
6. More than 15 years

Q11. If you have other NEC(s) in addition to the one specified in Q9, check page vii and indicate the last two digits of the CODE(s). If you have none, enter "99" in answer space for Q11 and Q12. — Q11a.__ __ (48) b.__ __ (50)

Q12. Select the number to indicate the years of experience you had in the NEC(s) stated in Q11 (estimate to the nearest year). — Q12a.__ __ (52) b.__ __ (53)

1. Less than 1 year
2. 1 to 2 years
3. 3 to 5 years
4. 6 to 10 years
5. 11 to 15 years
6. More than 15 years

Q13. From the list below, write the two-digit CODE to indicate the specialty of the department in which you are currently functioning. — Q13.__ __ (54)

CODE			
01	Administration	18	Urology
02	Education	19	Intensive Care
03	Anesthesiology	20	Operating Room
04	Coronary Care	21	Emergency Room
05	Dermatology	00	Other (specify)
06	Medicine - OPD		
07	Medicine - Wards		
08	Obstetrics/Gynecology		
09	Ophthalmology		
10	Orthopedics		
11	Otolaryngology		
12	Medical Laboratory		
13	Pediatrics		
14	Psychiatry		
15	Public Health		
16	Radiology		
17	General Surgery-Wards		

	ENTER ANSWER HERE	
Q14. Select the number to indicate the type of duty station at which you currently work, and have been working for at least 30 days: 1. Hospital 2. Dispensary 3. Aboard ship/sub, no M.O. (or D.O.) aboard 4. Aboard ship/sub, M.O. (or D.O.) aboard 5. Aviation squadron/wing, Navy or Marine 6. Marine ground forces 7. Administrative Commands 8. Research Commands or PMUs 9. Dental Clinic 0. Other _____	Q14.__	(56)
Q15. Indicate the number of people you normally supervise: 0. None 3. 6-10 1. 1-2 4. 11-20 2. 3-5 5. over 20	Q15.__	(57)

MEDICAL/DENTAL NEC (NAVAL ENLISTED CODE) AND TITLE

0000	General Service, Hospital or Dental Corpsman
3371	Health Physics & Process Control Technician
3391	Nuclear Power Plant Operator
8402	Nuclear Submarine Medicine Technician
8403	Submarine Medicine Technician
8404	Medical Field Service Technician
8405	Advanced Hospital Corps Technician (Class B)
8406	Aviation Medicine Technician
8407	Nuclear Medicine Technician
8408	Cardiopulmonary Technician
8409	Aviation Physiology Technician
8412	Clinical Laboratory Assistant Technician
8413	Tissue Culture Technician
8414	Clinical Chemistry Technician
8415	Medical Technology Technician
8416	Radioactive Isotope Technician
8417	Clinical Laboratory Technician
8432	Preventive Medicine Technician
8433	Tissue Culture and Tissue Bank Technician
8442	Medical Administrative Technician
8452	X-ray Technician
8453	Electrocardiograph/Basal Metabolism Technician
8454	Electroencephalograph Technician
8462	Optician (General) Technician
8463	Optician Technician
8466	Physical and Occupational Technician
8472	Medical Photography Technician
8482	Pharmacy Technician
8483	Operating Room Technician
8484	Eye, Ear, Nose, & Throat Technician
8485	Neuropsychiatry Technician
8486	Urological Technician
8487	Occupational Therapy Technician
8488	Orthopedic Appliance Mechanic
8489	Orthopedic Cast Room Technician
8492	Special Operations Technician
8493	Medical Deep Sea Diving Technician
8494	Physical Therapy Technician
8495	Dermatology Technician
8496	Embalming Technician
8497	Medical Illustration Technician
8498	Medical Equipment Repair Technician
8703	DT General, Advanced
8707	DT Field Service
8713	DT Clinical Laboratory
8714	DT Research Assistant
8722	DT Administrative
8732	DT Repair
8752	DT Prosthetic, Basic
8753	DT Prosthetic, Advanced
8765	DT Maxillofacial Prosthetic

RESPONSE BOOKLET INSTRUCTIONS

- To complete Part II, you need this TASK BOOKLET and the accompanying RESPONSE BOOKLET. Record all your answers to Part II in the RESPONSE BOOKLET.

- All pages of the RESPONSE BOOKLET are machine readable. In order for responses to be properly read, please be sure to:

    1. Use a No. 2 pencil only

    2. Carefully and completely shade the number corresponding to your answer under each column.

- Complete Page 00 of the RESPONSE BOOKLET first. Follow instructions given on the page. Fill in Line 1, and Boxes 2, 3, 4, and 5. Ignore all other boxes. BE SURE TO ENTER YOUR SOCIAL SECURITY NUMBER (WRITE DOWNWARD) IN THE BLANK SPACES IN BOX 3: then darkly shade the corresponding number on each line. An example of a completed Page 00 is shown on the next page (the handwritten notes in this example are for clarification only. Please do not make similar notes on your RESPONSE BOOKLET.)

- After completing Page 00, carefully read and follow instructions given on pages x through xiv.

- PLEASE HANDLE YOUR RESPONSE BOOKLET CAREFULLY. KEEP IT CLEAN AND AWAY FROM CHEMICALS. DO NOT DETACH, FOLD, WRINKLE OR CROSS OUT ANY PAGE.

DO NOT MARK IN THESE BOXES

RESPONSE BOOKLET

Serial No. 0233

Ignore these boxes

My name is

1 NAME Mary Smith

TASK ANALYSIS BACKGROUND DATA SHEET

INSTRUCTIONS

1. Use No. 2 pencil ONLY.
2. Indicate responses with solid black mark in space provided.
3. Erase COMPLETELY all changes.
4. Do not detach forms from packet.
5. Answer questions 2 through 5 below.
6. See Task Statement Booklet for further instructions for completing boxes to the right.

Today is June 4, 1972
June = 06
4 = 04
1972 = 72

2 TODAY'S DATE — MONTH: 06; DAY: 04; YEAR: 72

My Soc. Sec. No. is 304-26-9751

3 SOCIAL SECURITY NUMBER: 304269751

SEE COVER OF YOUR TASK BOOKLET Form N20, Ser. No. 0233

4 TASK BOOKLET — FORM: N; SERIAL NO.: 0233

My birthday is May 10, 1940
May = 05
1940 = 40

5 DATE OF BIRTH — MONTH: 05; DAY: 10; YEAR: 40

SEE TASK STATEMENT BOOKLET FOR INSTRUCTIONS TO COMPLETE BOXES

6 7 8 9 10 11 12

Ignore these boxes

PART II

PART II A LIST OF TASKS

PART II B LIST OF INSTRUMENTS AND EQUIPMENT

HOW TO RESPOND TO TASK STATEMENTS AND INSTRUMENTS

Your responses to each statement should be marked on the corresponding page, column and item number in your RESPONSE BOOKLET.

Note that each page in your RESPONSE BOOKLET has two response blocks. The left-hand block (items 1-25) is for entering responses to statements printed on LEFT pages of this TASK BOOKLET; the right-hand block (items 26-50) is for the responses to statements printed on RIGHT pages. Make sure that your answers are recorded in the appropriate block on every page. DO NOT MAKE ANY MARKS OTHER THAN YOUR ANSWERS!

Each time you start a new page in your RESPONSE BOOKLET, check the page on your TASK BOOKLET. See that the numbers match; then mark the page number in "Box X" in the response page (see instructions at the top of response page.) This is necessary for computer processing.

Tear the Response Guide (p. xiii) at the perforation, and use the correct side to respond to each task or instrument found on the following white pages. Note the following detailed explanation of responses.

Column A - (the responses to Column A differ for Part II A and Part II B, be sure to use the appropriate set of responses.)

Part II A

How often did you do this task within the last month? (If you were on leave, consider your immediate past working month.)

0 = Did not do

1 = Did less than 5 times

2 = Did 5 to 20 times

3 = Did 21 to 50 times

4 = Did 51 to 100 times

5 = Did more than 100 times

Part II B

How often did you use this instrument or piece of equipment within the last month? (If you were on leave, consider your immediate past working month.)

0 = Did not use

1 = Used less than 5 times

2 = Used 5-20 times

3 = Used 21-50 times

4 = Used 51-100 times

5 = Used more than 100 times

If answer in Column A is 0, go to the next statement. If answer is 1, 2, 3, 4 or 5, answer also Columns B, C & D.

Column B

Indicate the approximate time you spent on a single performance the last time you performed this task.

0 = less than one minute

1 = 1 to 4 minutes

2 = 5 to 10 minutes

3 = 11 to 20 minutes

4 = 21 to 30 minutes

5 = 31 to 60 minutes

6 = 1 to 2 hours

7 = more than 2 hours

Column C

Do you feel you need additional training to perform this task?

0 = No

1 = Yes

RESPONSE GUIDE

(DO NOT LOSE THIS TAB)

HOW TO RESPOND TO PART IIA - LIST OF TASKS

ANSWER COL. A FIRST. IF A = 0, GO TO NEXT STATEMENT: IF A = 1-5, ANSWER COLUMNS B, C & D ALSO.

A	B	C	D
FREQUENCY	TIME CONSUMED (single performance the last time performed)	DO YOU FEEL YOU NEED ADDITIONAL TRAINING TO PERFORM THIS TASK?	OPTION (Additional instructions will be given if this column is used)
0=DID NOT DO LAST MONTH 1=DID LESS THAN 5 TIMES 2=DID 5 TO 20 TIMES 3=DID 21 TO 50 TIMES 4=DID 51 TO 100 TIMES 5=DID MORE THAN 100 TIMES	0=LESS THAN 1 MINUTE 1=1 TO 4 MINUTES 2=5 TO 10 MINUTES 3=11 TO 20 MINUTES 4=21 TO 30 MINUTES 5=31 TO 60 MINUTES 6=1 TO 2 HOURS 7=MORE THAN 2 HOURS	0=NO 1=YES	

RESPONSE GUIDE

(DO NOT LOSE THIS TAB)

HOW TO RESPOND TO PART IIB - LIST OF INSTRUMENTS AND EQUIPMENT

ANSWER COL. A FIRST. IF A = 0, GO TO NEXT STATEMENT: IF A = 1-5, ANSWER COLUMNS B, C & D ALSO.

A	B	C	D
FREQUENCY	TIME CONSUMED (last time used)	DO YOU FEEL YOU NEED ADDITIONAL TRAINING TO PERFORM THIS TASK?	OPTION (Additional instructions will be given if this column is used)
0=DID NOT USE LAST MONTH 1=USED LESS THAN 5 TIMES 2=USED 5 TO 20 TIMES 3=USED 21 TO 50 TIMES 4=USED 51 TO 100 TIMES 5=USED MORE THAN 100 TIMES	0=LESS THAN 1 MINUTE 1=1 TO 4 MINUTES 2=5 TO 10 MINUTES 3=11 TO 20 MINUTES 4=21 TO 30 MINUTES 5=31 TO 60 MINUTES 6=1 TO 2 HOURS 7=MORE THAN 2 HOURS	0=NO 1=YES	

Part II A

LIST OF TASKS

LEFT PAGE 01 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 01 OF RESPONSE BOOKLET
1	ACCOMPANY PATIENT TO OTHER DEPARTMENTS/CLINICS
2	LOAD/UNLOAD PATIENT FROM AMBULANCE
3	RECEIVE PATIENTS ON ARRIVAL, I.E. INTRODUCE SELF, OBTAIN PATIENT'S NAME
4	VERIFY IDENTIFICATION OF PATIENT, E.G. FOR TREATMENT, MEDICATIONS, EXAMINATION
5	DRAPE/GOWN PATIENT FOR EXAMINATION/TREATMENT
6	GIVE PHISOHEX/BETADINE SCRUB TO PATIENTS
7	SHAVE AND SCRUB PATIENT FOR SURGERY OR DELIVERY OR TREATMENT OR EXAMINATION
8	DRAPE/UNDRAPE PATIENT FOR SURGERY
9	ASSIST PATIENT IN PUTTING ON CLOTHES
10	CLEAN AND CLOTHE PATIENTS AFTER SURGERY/TREATMENT/EXAMINATION
11	RESTRAIN PATIENTS, E.G. LINEN-LEATHER STRAPS, POSIE BELT, BLANKET WRAPS
12	STAND BY DURING EXAMINATION OF FEMALE PATIENTS
13	GIVE ALCOHOL SCRUB TO PATIENT'S SCALP
14	ASSIST PATIENT TO STAND/WALK/DANGLE
15	PLAY WITH CHILDREN
16	LOAD/UNLOAD PATIENTS FROM STRETCHERS (GURNEY)
17	POSITION/HOLD PATIENT FOR EXAMINATION, TREATMENT, SURGERY
18	RESTRAIN/CONTROL CHILDREN FOR EXAMINATION/TREATMENT/TEST
19	RESTRAIN/CONTROL PATIENT VERBALLY
20	MOVE/POSITION COMATOSE/ANESTHETIZED PATIENT
21	WATCH/GUARD PATIENT WHO IS ON PRECAUTION, E.G. ESCAPE
22	GROUND PATIENT, E.G. FOR ELECTRICAL CAUTERIZATION, DEFIBRILLATON, EKG
23	ACCOMPANY/ASSIST WHEELCHAIR PATIENTS TO RESTROOM
24	POSITION EXTREMITIES TO REDUCE SWELLING OR BLEEDING
25	MOVE/POSITION PATIENT WITH SUSPECTED FRACTURES OF EXTREMITIES

GO TO RIGHT HAND PAGE

RIGHT PAGE 01 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 01 OF RESPONSE BOOKLET
26	MOVE/POSITION PATIENT WITH SUSPECTED SPINAL FRACTURES OR CORD INJURIES
27	MOVE/POSITION PATIENT WITH HEAD INJURIES
28	MOVE/POSITION PATIENT WITH SUSPECTED INTERNAL INJURIES
29	ASSIST PATIENTS IN/OUT OF BED, EXAM OR C.R. TABLES
30	POSITION PATIENT WHO HAS DIFFICULTY BREATHING
31	POSITION PATIENT WHO HAS SYMPTOMS OF SHOCK
32	PROTECT PATIENT FROM INJURY DURING CONVULSION
33	ADJUST SIDERAILS/HEIGHT OF BED FOR PATIENT COMFORT/SAFETY
34	FEED INFANTS/CHILDREN
35	POSITION PATIENT IN BODY ALIGNMENT
36	EXPLAIN AIRCRAFT EVACUATION SAFETY PRECAUTIONS/ROUTINE FLIGHT INFORMATION
37	EXPLAIN ECG PROCEDURE TO PATIENT
38	EXPLAIN/ANSWER PATIENT'S QUESTIONS REGARDING EXAMINATION/TEST/ TREATMENT PROCEDURES
39	EXPLAIN X-RAY PROCEDURES TO PATIENT
40	REASSURE/CALM PATIENT BEFORE SURGERY
41	EXPLAIN STERNAL PUNCTURE PROCEDURES TO PATIENT
42	EXPLAIN/ANSWER QUESTIONS ABOUT TREATMENT PROCEDURE VIA TELEPHONE
43	REASSURE APPREHENSIVE PARENTS OF PEDIATRIC PATIENT
44	EXPLAIN EEG PROCEDURE TO PATIENT
45	REASSURE/CALM PATIENTS IN AIRCRAFT
46	REASSURE/CALM APPREHENSIVE (ANXIOUS) PATIENT
47	EXPLAIN MINOR SURGICAL PROCEDURE/OPERATION TO PATIENT/FAMILY
48	EXPLAIN PROCEDURES FOR PULMONARY FUNCTION TESTS TO PATIENT
49	ASK/INSTRUCT PATIENT TO COLLECT SPECIMEN
50	CHECK WITH PATIENT TO ENSURE THAT HE HAS COLLECTED SPECIMEN AS INSTRUCTED

TURN PAGE

RIGHT PAGE 08 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 08 OF RESPONSE BOOKLET

LEFT PAGE 02 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 02 OF RESPONSE BOOKLET
1	EXPLAIN/ANSWER PATIENT/FAMILY QUESTIONS ABOUT MEDICATIONS, E.G. PURPOSE, DOSE, SCHEDULE
2	REINFORCE PATIENT'S POSITIVE RESPONSE TO THERAPY
3	TEACH PATIENT/FAMILY SELF USE OF THERAPEUTIC EQUIPMENT/DEVICES
4	EXPLAIN/ANSWER QUESTIONS ABOUT DOCTOR'S INSTRUCTIONS TO PATIENT/ FAMILY
5	TEACH PATIENT MEDICATION STORAGE REQUIREMENTS,E.G. REFRIGERATION,EXPIRATION DATE
6	INFORM PATIENT OF PROGRESS OF THERAPY
7	WRITE STANDARD INSTRUCTIONS FOR PATIENT CONCERNING EXAMINATIONS/ THERAPY OR PROCEDURES
8	TEACH PATIENT/FAMILY SIDE EFFECTS OF MEDICATION,E.G. DROWSINESS,URINE DISCOLORATION
9	INFORM PATIENT/FAMILY WHERE TO OBTAIN MEDICAL SUPPLIES
10	EXPLAIN LUMBAR PUNCTURE PROCEDURES TO PATIENT
11	INFORM PATIENT OF PROCEDURES REQUIRED PRIOR TO/DURING EXAMINATION/TEST/TREATMENT
12	ANSWER PATIENT INQUIRIES REGARDING NONPRESCRIPTION DRUGS
13	REASSURE/CALM CHILDREN FOR EXAMINATION OR TREATMENT
14	EXPLAIN/ANSWER PATIENT'S QUESTIONS REGARDING SYMPTOMS/DISEASE/ TREATMENT
15	TEACH PATIENT SELF-ADMINISTRATION OF MEDICATIONS (OTHER THAN INJECTIONS)
16	INSTRUCT PATIENT IN PREVENTIVE CARE OF FINGER AND TOENAIL ABNORMALITIES
17	INFORM PATIENT/FAMILY OF SYMPTOMS OF INTOLERANCE/OVERDOSE TO MEDICATION, E.G. BLEEDING GUMS, COMA
18	REVIEW WITH PATIENT PRINTED INSTRUCTIONS FOR EXAMINATION/THERAPY PROCEDURES
19	INFORM PATIENT/FAMILY OF MILITARY SERVICES, E.G. NAVY RELIEF, VETERANS BENEFITS
20	TEACH PATIENT/FAMILY ADMINISTRATION OF INJECTIONS
21	APPLY/CHANGE/ADJUST LEADS OR NEEDLE ELECTRODES, E.G. MONITOR, EKG, EEG
22	CHECK PATIENTS TEMPERATURE
23	OBSERVE/RECORD OR DESCRIBE CHARACTERISTICS OF DRAINAGE FROM EYES/EARS
24	OBSERVE FOR/REPORT SYMPTOMS OF HEAD COLDS
25	OBSERVE FOR/REPORT SYMPTOMS OF SINUS BLOCKAGE

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 02 OF RESPONSE BOOKLET
26	OBSERVE/RECORD PATIENT'S PHYSICAL/EMOTIONAL RESPONSE TO TREATMENT/DIAGNOSTIC PROCEDURES
27	OBSERVE/REPORT SYMPTOMS OF SIDE EFFECTS TO TREATMENT/MEDICATION
28	OBSERVE PATIENT/PERSONNEL IN HYPOBARIC/HYPERBARIC CHAMBER
29	MEASURE CONTENTS OF DRAINAGE CONTAINER, E.G. BAGS, BOTTLES, BASINS, URINALS
30	OBSERVE/RECORD OR DESCRIBE CHARACTERISTICS OF DRAINAGE FROM INTERNAL BODY ORGANS
31	OBSERVE/RECORD OR DESCRIBE CHARACTERISTICS OF DRAINAGE FROM INCISIONS/WOUNDS
32	OBSERVE/RECORD OR DESCRIBE CHARACTERISTICS OF SPUTUM, MUCUS
33	OBSERVE FOR/REPORT SYMPTOMS OF DENTURE IRRITATION
34	OBTAIN PRELIMINARY MEDICAL HISTORY, I.E. PAST/PRESENT COMPLAINTS, ALLERGIES, MEDICATIONS
35	MEASURE/WEIGH PATIENT OR PERSONNEL
36	OBSERVE PATIENT FOR SIGNS OF CHILLING
37	PALPATE (FEEL) BLADDER FOR DISTENSION (FULLNESS)
38	OBSERVE FOR/REPORT SYMPTOMS OF DEHYDRATION
39	OBSERVE FOR/REPORT DECREASED URINE OUTPUT OF PATIENTS SUSCEPTIBLE TO RENAL SHUTDOWN
40	EVALUATE PATIENT'S INABILITY TO VOID
41	EVALUATE SYMPTOMS OF DECREASED URINARY OUTPUT
42	OBSERVE/RECORD OR DESCRIBE CHARACTERISTICS OF URINE OR FECES OR VOMITUS OR REGURGITATION
43	DO CENTRAL FIELD VISION TEST
44	CHECK PATIENT'S RESPONSE TO PAINFUL STIMULUS AND TEMPERATURE
45	CHECK PATIENT'S RESPONSE TO TOUCH, PRESSURE, TEMPERATURE
46	CHECK PATIENT'S SENSORY RESPONSES TO TASTE, SMELL
47	EVALUATE PATIENT'S COMPLAINTS OR SYMPTOMS OF PAIN
48	TEST FIELD OF VISION WITHOUT INSTRUMENT
49	TEST FOR DIPLOPIA
50	TAKE BLOOD PRESSURE

TURN PAGE

LEFT PAGE 03 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 03 OF RESPONSE BOOKLET
1	CHECK FEMORAL PULSE FOR PRESENCE AND QUALITY
2	CHECK RADIAL (WRIST) PULSE
3	CHECK CENTRAL VENOUS PRESSURE
4	IDENTIFY AND DESCRIBE CARDIAC ARRHYTHMIAS WHICH APPEAR ON MONITOR AND/OR TRACING STRIP
5	PERFORM CIRCULATION CHECK, E.G. COLOR, PULSE, TEMPERATURE OF SKIN, CAPILLARY RETURN
6	TAKE ELECTROCARDIOGRAPH (EKG,ECG)
7	TAKE CUVETTE EAR OXIMETRY TESTS
8	TAKE PHONOCARDIOGRAPH
9	IDENTIFY AND DESCRIBE GROSS ABNORMALITIES IN PACEMAKER PATTERN
10	TAKE SPECIAL ELECTROCARDIOGRAPHS, E.G. V-7, V3R, V-9
11	PERFORM TILT TEST FOR CIRCULATION
12	TAKE TWO STEP MASTER ELECTROCARDIOGRAPH
13	TAKE TREADMILL ELECTROCARDIOGRAPH
14	TAKE VECTORCARDIOGRAPH
15	OBSERVE FOR/REPORT SYMPTOMS OF CARDIAC ARREST
16	OBSERVE FOR/REPORT SYMPTOMS OF SHOCK
17	EXAMINE FOR SYMPTOMS OF INTERNAL HEMORRHAGE
18	OBSERVE FOR/REPORT SYMPTOMS OF EXTERNAL HEMORRHAGE
19	READ ECG TRACING FOR TECHNICAL ADEQUACY
20	DETERMINE APICAL PULSE RATE/RHYTHM WITH STETHESCOPE
21	CHECK PATIENT'S AIRWAY FOR PATENCY/OBSTRUCTION
22	MONITOR PHYSICAL CONDITION OF SUBJECT DURING RESEARCH EXERCISES
23	OBSERVE PATIENT FOR/REPORT AND DESCRIBE ABNORMAL RESPIRATIONS
24	CHECK/COUNT RESPIRATIONS
25	MEASURE TIDAL VOLUME

GO TO RIGHT HAND PAGE

RIGHT PAGE 03 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 03 OF RESPONSE BOOKLET
26	MEASURE CO DIFFUSION CAPACITY
27	REGULATE OXYGEN FLOW DURING CARDIOPULMONARY TESTS
28	OBSERVE FOR/REPORT SYMPTOMS OF ASPIRATION
29	OBSERVE FOR/REPORT CHARACTERISTICS OF COUGH
30	PERFORM PRE AND POST BRONCHODILATOR PULMONARY FUNCTION TESTS
31	MEASURE 02 UPTAKE
32	MEASURE MINUTE VOLUME VENTILATION
33	MEASURE VITAL CAPACITY
34	MEASURE TIMED VITAL CAPACITY
35	MEASURE MAXIMUM MINUTE EXPIRATORY FLOW RATE
36	MEASURE TOTAL LUNG CAPACITY
37	MEASURE FUNCTIONAL RESIDUAL CAPACITY
38	PERFORM HELIUM DILUTION
39	PERFORM N2 WASHOUT
40	READ PULMONARY FUNCTION GRAPHS FOR TECHNICAL ADEQUACY
41	CHECK PUPIL REACTION TO LIGHT
42	EXAMINE TYMPANIC MEMBRANE FOR REDNESS, SWELLING
43	IDENTIFY AND DESCRIBE CHANGES IN SAW LINE ON EEG MONITOR
44	IDENTIFY/DESCRIBE MANIFESTATIONS OF LOSS OF CONTACT WITH REALITY, E.G. HALLUCINATIONS, DELUSIONS
45	DETERMINE PATIENT'S PATTERN OF INTERACTION WITH OTHERS
46	OBSERVE FOR/REPORT OR DESCRIBE SYMPTOMS OF IRRITABILITY, RESTLESSNESS, APPREHENSION
47	PERFORM NEUROLOGICAL (CRANIE) CHECKS, E.G. PUPILS, VITAL SIGNS, PATIENT RESPONSE
48	TAKE AWAKE ELECTROENCEPHALOGRAM
49	OBSERVE PATIENT'S GENERAL EMOTIONAL CONDITION, E.G. FACIAL AND EYE EXPRESSIONS, QUALITY OF VOICE
50	OBSERVE PATIENT'S ORIENTATION TO TIME, PLACE, PERSON

TURN PAGE

LEFT PAGE 04 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 04 OF RESPONSE BOOKLET
1	OBSERVE PATIENT'S PHYSICAL MOVEMENT, E.G. MUSCULAR COORDINATION, POSTURE, BALANCE
2	TAKE ELECTRO-NYSTAGMUS-GRAMS
3	EVALUATE EEG TRACING FOR TECHNICAL ADEQUACY
4	CHECK FOR EARDRUM PERFORATION BY POLITZERIZATION, I.E. EARDRUM INFLATION
5	TAKE ELECTRO-TREMOR-GRAMS
6	TAKE VISUAL EVOKED RESPONSES
7	TAKE PHOTOGRAPHS OF OSCILLOSCOPE TRACINGS
8	USE HYPER-VENTILATION ACTIVATION PROCEDURE DURING EEG OR ECG
9	USE PAIN ACTIVATION PROCEDURE DURING EEG
10	USE STROBE-TAC PROCEDURE DURING EEG
11	USE ELECTRICAL STIMULUS WITH EEG EXAMINATION
12	ASSESS EFFECT OF PATIENTS ON SELF/OTHER STAFF MEMBERS
13	TAKE NARCOLEPSY EEG
14	INDUCE NEUROLOGICAL SEIZURES
15	SCORE SLEEP EEG
16	SCORE AWAKE EEG
17	SCORE NARCOLEPSY EEG
18	DETERMINE EEG MONTAGE
19	SCORE AUTONOMIC RESPONSE
20	TAKE ALCOHOL TOLERANCE TEST (ATT) EEG
21	DETERMINE AND CORRECT CAUSE OF EEG ARTIFACTS
22	GIVE TUBERCULIN MANTOUX TEST
23	READ TUBERCULIN TEST REACTION
24	GIVE HISTOPLASMOSIS/COCCIDIOMYCOSIS SKIN TEST
25	CHECK/EXAMINE INCISIONS/WOUNDS FOR PROGRESS OF HEALING

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 04 OF RESPONSE BOOKLET
26	CHECK COLOR OF SKIN, E.G. CYANOSIS, BLANCHING, JAUNDICE, MOTTLING
27	CHECK TEMPERATURE OF SKIN
28	CHECK PATIENT FOR SWEATING/DIAPHORESIS
29	EXAMINE FOP SYMPTOMS OF EXTERNAL FUNGAL INFECTIONS, E.G. RINGWORM
30	CHECK PATIENT FOR PROSTHESIS, E.G. EYE/TEETH/EXTPEMITY
31	EXAMINE FOR SYMPTOMS OF SNAKE BITES
32	CHECK SKIN TURGOR (ELASTICITY)
33	CHECK FOR EDEMA (SWELLING) OF EXTREMITIES, EYES
34	OBSERVE FOR/REPORT SYMPTOMS OF GINGIVAL ABRASION
35	OBSEPVE FOR/REPORT SYMPTOMS OF INFECTION OF ORAL MUCOSA, E.G. THRUSH
36	CHECK SKIN FOR AIR IN TISSUE (CREPITUS)
37	CHECK DEGREE OF PITTING EDEMA, I.E. 1ST-4TH DEGREE
38	EXAMINE FOR SYMPTOMS OF CONTACT DERMITITIS
39	EXAMINE FOR SYMPTOMS OF ATOPIC DERMATITIS
40	EXAMINE AND DESCRIBE CHARACTERISTICS OF HIVES, RASHES
41	EXAMINE MUCOUS MEMBRANES OF NOSE/THROAT FOR INFLAMMATION
42	TAKE VENTRICULOGRAMS
43	TAKE ANGIOCARDIOGRAMS
44	DETERMINE EXPOSURE TECHNIQUE FOR X-RAY SERIES
45	DETERMINE AND SET KILOVOLTAGE-MAJOR/MINOR-PEAK METER ON X-RAY UNIT
46	DETERMINE AND SET MA METER ON X-RAY UNIT
47	DETERMINE AND SET IMPULSE TIMER ON X-RAY UNIT
48	SELECT ALTERNATIVE TECHNIQUES IN SETTING X-RAY UNIT
49	TAKE X-RAYS USING FIXED GRID TECHNIQUE
50	TAKE X-RAYS USING BUCKY TECHNIQUE

TURN PAGE

LEFT PAGE 05 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 05 OF RESPONSE BOOKLET
1	POINT OUT POSSIBLE ABNORMALITIES ON X-RAY FILM TO DOCTOR
2	STIMULATE/AROUSE PATIENT AFTER ANESTHESIA
3	GIVE CARE/INSTRUCTION TO PATIENT WHO CANNOT SPEAK OR UNDERSTAND ENGLISH
4	GIVE CARE TO PATIENT WITH HEARING/SPEECH/SIGHT LOSS
5	APPLY RIB BELT
6	TAPE ANKLE, WRIST, KNEE, CHEST FOR IMMOBILIZATION
7	ADMINISTER MEDICATION TO EYE/EAR/NOSE
8	ADMINISTER INTRADERMAL INJECTION
9	ADMINISTER MEDICATION BY INTRAMUSCULAR INJECTION
10	ADMINISTER MEDICATION BY SUBCUTANEOUS INJECTION
11	ADMINISTER SUBLINGUAL/BUCCAL MEDICATION
12	ADMINISTER I.V. MEDICATION DIRECTLY INTO VEIN
13	INSTILL MEDICATION INTO TUBE, MACHINE, E.G. TRACH TUBE, CATHETERS, I.P.P.B. MACHINE
14	ADMINISTER I.V. MEDICATION VIA SOLUSET, PIGGY BACK, OR I.V. BOTTLE
15	MONITOR/REGULATE INTRAVENOUS SOLUTION FLOW RATE
16	APPLY/CHANGE STERILE DRESSINGS
17	PERFORM INTRAVENOUS CUTDOWN
18	IRRIGATE I.V. TUBING
19	REGULATE I.V. FLOW/DRIP ACCORDING TO CHANGES IN VITAL SIGNS, MONITOR READINGS, URINARY OUTPUT
20	ADD/CHANGE I.V. BOTTLE DURING CONTINUOUS INFUSION
21	ADD MEDICATION TO AND LABEL I.V. SOLUTIONS
22	CALCULATE RATE OF I.V. FLOW, E.G. DROPS PER MINUTE
23	APPLY WET COMPRESSES/SOAKS/PACKS
24	CONTROL BLEEDING BY PRESSURE DRESSING
25	APPLY/CHANGE BANDAGES, E.G. ROLLER, TRIANGULAR, KURLEX

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 05 OF RESPONSE BOOKLET
26	REINFORCE DRESSINGS, I.E. ADD DRESSINGS
27	CONTROL BLEEDING BY APPLYING TOURNIQUETS
28	CONTROL MINOR BLEEDING, E.G. AFTER EXTRACTION OR INCISION
29	CONTROL BLEEDING BY APPLYING DIGITAL PRESSURE ON BLOOD VESSEL
30	ADMINISTER ORAL MEDICATION
31	ADMINISTER CONTROLLED DRUGS
32	ADMINISTER TISSUE INFILTRATION/LOCAL ANESTHESIA
33	ADMINISTER NARCOTICS
34	GIVE EXTERNAL CARDIAC MASSAGE
35	RESUSCITATE PATIENT USING AMBU BAG
36	RESUSCITATE PATIENT USING MOUTH TO MOUTH TECHNIQUE
37	ROTATE TOURNIQUETS
38	ADJUST PACEMAKER, I.E. DECREASE/INCREASE RATE, CHANGE TO AUTOMATIC/DEMAND
39	DEFIBRILLATE PATIENT
40	GIVE I.P.P.B. TREATMENT
41	GIVE OXYGEN THERAPY, I.E. CANNULA, CATHETER/MASK
42	GIVE STEAM/MIST TREATMENT
43	CHANGE TRACHEOTOMY TUBE
44	PERFORM OXYGEN HYPERBARIC TREATMENT
45	ADMINISTER COMPRESSION/RECOMPRESSION TREATMENT IN CHAMBER
46	RESUSCITATE PATIENT USING ARM LIFT OR HAND-BACK TECHNIQUE
47	RESUSCITATE PATIENT USING RESPIRATOR
48	SUCTION TRACHEA, I.E. DEEP ENDOTRACHEAL SUCTION
49	INSERT NEEDLE INTO TRACHEA TO MAINTAIN AIRWAY
50	TREAT PATIENT/PERSONNEL WHO HYPERVENTILATE, E.G. GIVE BREATHING INSTRUCTIONS, CARBON DIOXIDE

TURN PAGE

LEFT PAGE 06 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 06 OF RESPONSE BOOKLET
1	GIVE CARBON DIOXIDE INHALATION THERAPY
2	GIVE OXYGEN THERAPY VIA TENT
3	TEACH BREATHING EXERCISES
4	GIVE CARE TO PATIENT ON A RESPIRATOR, E.G. SUCTION, FEED, PLACE ON AND OFF MACHINE
5	PERFORM CHEST VIBRATION AND CUPPING TREATMENT, I.E. CHEST PHYSIOTHERAPY
6	PLACE PATIENT IN POSTURAL DRAINAGE POSITION
7	TEACH PATIENT TO COUGH AND DEEP BREATHE
8	INTUBATE PATIENT'S TRACHEA/LARYNX
9	PERFORM CRICOTHYROTOMY
10	CARDIAC CATHETERIZATION SCRUB
11	CARDIAC CATHETERIZATION CIRCULATE
12	SCRUB FOR SURGERY/STERILE PROCEDURE
13	GOWN FOR STERILE PROCEDURE
14	SET UP MAYO STAND WITH INSTRUMENTS
15	SET UP SUTURE BOOK/TOWEL
16	GOWN AND GLOVE PERSONNEL FOR STERILE PROCEDURE
17	PASS INSTRUMENTS TO PHYSICIAN
18	ADJUST SURGICAL INSTRUMENTS/EQUIPMENT DURING SURGICAL PROCEDURE
19	PASS CONTAMINATED MATERIAL TO CIRCULATOR
20	PASS SPECIMEN TO CIRCULATOR
21	OBTAIN EQUIPMENT, MEDICATIONS, INSTRUMENTS P.R.N. FOR PERSONNEL PERFORMING STERILE PROCEDURE
22	FLASH STERILIZE INSTRUMENTS
23	ADJUST SURGICAL SPOT LIGHT
24	REMOVE CONTAMINATED GLOVES FROM SURGICAL TEAM
25	REPORT BREAK IN STERILE TECHNIQUE TO PERSONNEL

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 06 OF RESPONSE BOOKLET
26	TIE UP SURGICAL GOWN FOR SCRUBBED PERSONNEL
27	PASS STERILE DRAPES TO SURGEON
28	CLEAN AND REPOSITION INSTRUMENTS DURING SURGICAL PROCEDURE
29	SUPPLY PHYSICAL COMFORT TO SURGICAL TEAM, E.G. WIPE BROW, RUB BACK
30	MAINTAIN DRY STERILE FIELD DURING SURGERY
31	PASS STERILE MATERIALS, EQUIPMENT, MEDICATION, TO PERSONNEL PERFORMING STERILE PROCEDURE
32	POUR STERILE SOLUTION, E.G. STERILE WATER, SALINE
33	ARRANGE FURNITURE/SET UP EQUIPMENT/SUPPLIES FOR PROCEDURE, E.G. EXAM, TREATMENT
34	LABEL MEDICINE GLASSES WITH NAME AND AMOUNT OF DRUG FOR STERILE FIELD
35	HOLD VIALS/AMPULES OF DRUGS FOR USE AND DRUG VERIFICATION DURING STERILE PROCEDURE
36	DETERMINE PATIENT CARE ASSIGNMENT FOR INDIVIDUAL STAFF MEMBER
37	CONDUCT TEAM/WARD CONFERENCE (CLASS) ON PROBLEM/PROGRESS OF INDIVIDUAL PATIENT
38	CONSULT DOCTOR OR NURSE TO OBTAIN INFORMATION/ADVICE ON PATIENT CARE
39	MAKE SUGGESTION REGARDING PATIENT CARE, E.G. NEED OF MEDICATION, TREATMENT
40	INITIATE AND ORDER DIAGNOSTIC TEST
41	RECOMMEND PSYCHOLOGICAL APPROACH TO USE WITH PATIENT
42	CONFER WITH CORPSMAN TO DISCUSS PATIENT TREATMENT/PROGRESS/ PROBLEM
43	REVIEW DOCTOR'S ORDERS AND INSTRUCTIONS WITH DOCTOR
44	REVIEW PAST AND PRESENT MEDICAL/DENTAL HISTORY TO PLAN CARE
45	TALK WITH PATIENT TO ASCERTAIN NEEDS/PROBLEMS
46	ASK PATIENT/CHECK CHART FOR CONTRAINDICATION FOR TREATMENT, PROCEDURE, TEST
47	MAKE SUGGESTION REGARDING NEED FOR DIAGNOSTIC TESTS
48	SUGGEST CHANGES IN NURSING CARE PLAN FOR PATIENT
49	ELICIT INFORMATION TO ASCERTAIN PATIENT'S UNDERSTANDING/ ACCEPTANCE OF ILLNESS/TREATMENT
50	SCREEN PATIENT VIA TELEPHONE TO DETERMINE NEED FOR MEDICAL ATTENTION

TURN PAGE

LEFT PAGE 07 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 07 OF RESPONSE BOOKLET
1	PLAN RECREATIONAL/DIVERSIONAL THERAPY/ACTIVITIES FOR PATIENT, E.G. MOVIES, FIELD TRIPS
2	MODIFY PATIENT CARE ACCORDING TO PATIENT'S RESPONSE/NEED, E.G. PHYSICAL ACTIVITY
3	CONFER WITH PARAMEDICAL PERSONNEL TO DISCUSS PATIENT PROGRESS/ PROBLEMS, E.G. O.T., P.T., SOCIAL WORKER
4	DETERMINE PRIORITIES FOR TREATMENT OF PATIENTS
5	EVALUATE PATIENT'S SOCIO-CULTURAL BACKGROUND FOR INFLUENCES ON HEALTH CARE
6	CALCULATE/PLAN ORAL FLUID RESTRICTIONS
7	DETERMINE NEED TO CHECK VITAL SIGNS MORE OFTEN/LESS OFTEN THAN ORDERED BY DOCTOR
8	COLLECT UNORDERED SPECIMENS FOR NURSE/DOCTOR TO EVALUATE
9	CONFER WITH PATIENT/FAMILY TO PLAN PATIENT CARE
10	COORDINATE PATIENT TREATMENT PLAN WITH OTHER DEPARTMENTS/ AGENCIES
11	EVALUATE PATIENT'S PROGRESS/RESPONSE TO THERAPEUTIC REGIME
12	MODIFY/CHANGE PATIENT TREATMENT PLAN
13	MODIFY/CHANGE PATIENT'S DIET IN ACCORD WITH PERSONAL FOOD PREFERENCES
14	REVIEW TEST/EXAMINATION/CONSULTATION REPORTS FOR ABNORMAL (POSITIVE) FINDINGS
15	PLAN/MODIFY DIAGNOSTIC PROCEDURES ACCORDING TO PATIENT'S RESPONSE/NEED
16	ASCERTAIN IF PATIENT HAS BEEN PREPPED FOR TEST/TREATMENT PROCEDURE
17	INITIATE TREATMENT PROCEDURES IN THE ABSENCE OF A DOCTOR
18	COORDINATE TREATMENT PLAN OF CHRONICALLY ILL CHILD WITH SCHOOL
19	FOLLOW UP/EVALUATE PATIENT TREATMENT/PROGRESS AFTER DISCHARGE FROM MEDICAL FACILITY
20	PLAN PATIENT DISCHARGE, E.G. REFERRALS NEEDED, HEALTH EDUCATION NEEDS, FAMILY/HOME PREPARATION
21	FOLLOW UP FAILED APPOINTMENT,E.G. BY PHONE,LETTER,HOME VIST
22	EVALUATE OCCUPATION/NAVY ENVIRONMENT TO PLAN PATIENT DISCHARGE
23	DETERMINE NEED TO NOTIFY DOCTOR/NURSE OF PATIENT'S CONDITION
24	DETERMINE NEED TO DEFIBRILLATE PATIENT
25	DETERMINE PATIENT'S READINESS FOR WORK THERAPY

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 07 OF RESPONSE BOOKLET
26	INTERVIEW VD PATIENT TO PLAN TREATMENT AND FOLLOW UP OF CONTACTS
27	CALCULATE SPECIAL DIET, E.G. LOW SODIUM, DIABETIC DIET
28	REVIEW PROTHROMBIN TIME/CLOTTING TIME PRIOR TO ADMINISTRATION OF ANTICOAGULANT
29	DETERMINE WHEN TO GIVE P.R.N. MEDICATION, E.G. PAIN, SEDATIVE, LAXATIVE
30	DETERMINE WHEN TO GIVE P.R.N. CARDIOVASCULAR MEDICATION, E.G. XYLOCAINE
31	REVIEW BLOOD SUGAR/FRACTIONAL URINE TESTS PRIOR TO ADMINISTRATION OF INSULIN
32	DEVELOP COMMUNICATION TECHNIQUES FOR PATIENT WITH COMMUNICATION PROBLEM, E.G. CARDS
33	RECOMMEND PATIENT'S TRANSFER ACCORDING TO NEED/READINESS, E.G. FROM R.R., TO DELIVERY ROOM
34	CONFER WITH CHAPLAIN TO DISCUSS PATIENT/FAMILY NEEDS/PROBLEMS
35	RECOMMEND NEED FOR SPECIALTY CONSULT/REFERRAL
36	RECOMMEND NEED FOR PARAMEDICAL CONSULT OR REFERRAL, E.G. SOCIAL WORKER, O.T., P.T.
37	REFER PATIENT TO DOCTOR FOR TREATMENT
38	REFER PATIENT TO NURSE FOR TREATMENT
39	FOLLOW UP PATIENT TO DETERMINE IF NEEDED SERVICES WERE OBTAINED
40	REFER PATIENT TO LEGAL RESOURCES
41	INTERVIEW/EVALUATE PATIENT/FAMILY FOR REFERRAL/CONSULT
42	EVALUATE PATIENT/FAMILY RESOURCES/PREPARATION FOR ADMISSION/ DISCHARGE, E.G. TRANSPORTATION, CHILD CARE
43	DETERMINE METHOD OF MOVING/TRANSPORTING PATIENT
44	SCREEN PATIENT ON ARRIVAL TO DETERMINE WHICH STAFF MEMBER PATIENT SHOULD SEE
45	DETERMINE NEED FOR EMERGENCY EQUIPMENT/MEDICATION FOR POSSIBLE PATIENT USE
46	DETERMINE PRIORITIES FOR EVACUATION OF PATIENTS
47	GIVE EMERGENCY TREATMENT/FIRST AID FOR RESPIRATORY IMPAIRMENT
48	GIVE EMERGENCY TREATMENT/FIRST AID FOR CARDIAC ARREST
49	GIVE EMERGENCY TREATMENT/FIRST AID FOR EXTERNAL HEMORRAGE
50	GIVE EMERGENCY TREATMENT/FIRST AID FOR INTERNAL INJURIES

TURN PAGE

LEFT PAGE 08 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 08 OF RESPONSE BOOKLET
1	GIVE EMERGENCY TREATMENT/FIRST AID FOR INTERNAL HEMORRHAGE
2	GIVE EMERGENCY TREATMENT/FIRST AID FOR SEVERE DRUG REACTION
3	GIVE EMERGENCY TREATMENT/FIRST AID FOR ANAPHYLACTIC REACTION
4	DETERMINE PATIENT BED LOCATION WITHIN WARD/UNIT
5	DETERMINE NEED AND INITIATE TRANSFER OF PATIENT TO A MEDICAL CARE FACILITY
6	GIVE REPORT ON CHANGES/SPECIAL CARE/TREATMENT/TESTS FOR PATIENT
7	ARRANGE ROOM/UNIT FOR INDIVIDUAL PATIENT NEEDS, E.G. BLIND/ BEDRIDDEN/POST-OP PATIENT
8	CARRY OUT DOCTOR'S VERBAL ORDERS
9	OBTAIN CLARIFICATION OF CONFLICTING DOCTOR'S ORDERS
10	VERIFY/UPDATE PATIENT'S DIAGNOSIS IN RECORD/CARDEX
11	VERIFY COMPLETENESS OF DOCTOR'S ORDERS, E.G. FOR ALL ROUTINE ADMISSION OR PRE-OP ORDERS
12	VERIFY THAT DOCTOR'S ORDERS ARE UP-TO-DATE, E.G. TREATMENT, MEDICATION, DIET
13	WRITE NURSING NOTES
14	GIVE/RECEIVE VERBAL REPORTS ABOUT PATIENT
15	GIVE TRANSFER REPORT TO WARD OR RECEIVING UNIT ON PATIENT'S CONDITION, TREATMENT AND CARE PLAN
16	MAKE ENTRIES ON DOCTOR'S PROGRESS NOTES
17	WRITE ORDERS IN PATIENT'S CHART FOR DOCTOR'S COUNTERSIGNATURE
18	ENSURE THAT DOCTOR'S ORDERS ARE CARRIED OUT
19	DETERMINE IF PERSONNEL AT SICK CALL ARE FIT FOR DUTY
20	INFORM DOCTOR/NURSE OF PATIENT'S CONDITION, E.G. DESCRIPTION OF INJURY, SYMPTOMS, RESPONSE
21	CONVERT MEDICATION DOSAGE FROM CC TO MINIMS, GRAINS TO GRAM
22	CONVERT COMMON WEIGHTS AND MEASURES FROM ONE SYSTEM TO ANOTHER, E.G. CC TO TSP, LBS TO KG
23	COMPUTE AMOUNTS OF INGREDIENTS FOR COMPOUNDING/PREPARING PHARMACEUTICALS
24	WEIGH/MEASURE CHEMICALS
25	COMPOUND COLLODIONS

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 08 OF RESPONSE BOOKLET
26	REVIEW/UPDATE PHARMACEUTICAL COMPOUNDING FORMULA REFERENCE FILE
27	PREPARE LOCAL ANESTHETIC SOLUTIONS FOR USE
28	MIX OR PREPARE CONTRAST MEDIA SUCH AS BARIUM
29	MAKE DILUTIONS OF MEDICINALS
30	PREPARE MIXTURES
31	PREPARE AND BOTTLE I.V. SOLUTIONS, E.G. RINGER'S LACTATE
32	POUR/DRAW UP MEDICATIONS OTHER THAN NARCOTICS AND CONTROLLED DRUGS
33	DILUTE OR MIX POWDERED MEDICATIONS
34	CONFER WITH PRESCRIBING DOCTOR ON QUESTIONS CONCERNING PRESCRIPTIONS
35	ANSWER PERSONNEL INQUIRIES REGARDING MIXING/ADMINISTERING DRUGS
36	CHECK PRESCRIPTIONS FOR INCOMPATABILITY/IDIOSYNCRACIES OF CONCURRENTLY PRESCRIBED MEDICATIONS
37	CHECK PRESCRIPTIONS FOR OVERDOSAGE
38	PREPARE MEDICATIONS AND RECORDS FOR PATIENT IN FLIGHT
39	READ/USE PHARMACEUTICAL MANUALS, FORMULARY, PDR
40	DETERMINE SIMILARITIES BETWEEN PHARMACEUTICAL TRADE NAMES AND GENERIC NAMES
41	ANSWER INQUIRIES REGARDING DRUG REACTION
42	COMPILE LIST OF MEDICATION ORDERS REQUIRING DOCTOR'S RENEWAL
43	DO AN INVENTORY OF DRUGS OTHER THAN NARCOTICS AND CONTROLLED DRUGS
44	CHECK DRUGS FOR SUPPLY NEEDS
45	DISPOSE OF/RETURN MEDICATIONS/DRUGS WHOSE SHELF-LIFE HAS EXPIRED
46	DISPOSE OF MEDICATIONS PREPARED BUT NOT ADMINISTERED
47	MONITOR EXPIRATION DATED PHARMACEUTICALS
48	ORDER STOCK MEDICATIONS FROM PHARMACY
49	PREPARE REFERENCE DRUG LISTS, E.G. QUANTITY LIMITED, PREPAK QUANTITY
50	SAFEGUARD POISONS

TURN PAGE

LEFT PAGE 09 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 09 OF RESPONSE BOOKLET
1	CLASSIFY AND STORE DRUGS
2	DISPOSE/REPACK UNCLAIMED MEDICATIONS/DRUGS
3	CHECK DRUGS FOR VISIBLE CONTAMINATION/DETERIORATION, E.G. CLOUDINESS, COLOR CHANGE
4	SIGN FOR NARCOTICS AND RESTRICTED DRUGS
5	ROTATE PHARMACEUTICAL STOCKS TO INSURE FRESHNESS AND POTENCY
6	DETERMINE EXPIRATION DATE OF LOCALLY COMPOUNDED PHARMACEUTICALS
7	DETERMINE WHETHER TO DESTROY OR TO RETURN PHARMACEUTICALS TO MANUFACTURER
8	STOCK ANESTHETIC CART
9	DETERMINE MEDICATIONS AND SUPPLIES FOR DRUG KITS
10	NEGOTIATE WITH CIVILIAN SUPPLIERS REGARDING NEW DRUGS
11	NEGOTIATE WITH PHARMACEUTICAL COMPANY REPRESENTATIVES FOR FREE INTRODUCTORY SAMPLES
12	WASH/PREPARE GLASSWARE FOR LAB USE, INCLUDING SPECIAL PREPARATION, E.G. ACID WASH, SILICONE COAT
13	PICK UP/DELIVER SPECIMENS
14	LABEL/ACCESSION SPECIMEN CONTAINERS, E.G. TUBES, SLIDES
15	MEASURE/DILUTE/PRESERVE LAB SPECIMEN E.G. URINE, BLOOD FOR SUBSEQUENT TESTING
16	CALCULATE AND PREPARE PERCENT SOLUTIONS
17	CHECK/ADJUST PH OF BUFFERS/REAGENTS
18	PREPARE STANDARD CURVE
19	RUN TEST STANDARD TO CHECK ACCURACY OF EQUIPMENT
20	COLLECT CAPILLARY BLOOD SAMPLE, I.E. FROM FINGER TIP, TOE OR EAR LOBE
21	USE LOCALLY DEVELOPED MANUALS/GUIDES TO FOLLOW ANALYTICAL PROCEDURES
22	USE COMMERCIAL MANUALS TO FOLLOW ANALYTICAL PROCEDURES
23	READ EQUIPMENT MANUALS FOR OPERATION AND MAINTENANCE OF EQUIPMENT
24	PLOT READING/VALUES ON SEMILOG PAPER
25	PLOT READING/VALUES ON RECTILINEAR GRAPH PAPER

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 09 OF RESPONSE BOOKLET
26	LOOK UP NORMAL VALUES FOR LABORATORY TESTS FROM REFERENCE TABLE/ BOOK
27	COLLECT BLOOD BY ARTERIAL PUNCTURE
28	DO MICRO-HEMATOCRIT (NON-AUTOMATED METHOD)
29	TEST FOR THE PRESENCE OF BACTERIA IN OTHER BODY SECRETIONS, E.G. NASAL, SPINAL
30	TAKE SWAB CULTURES FROM HOSPITAL EQUIPMENT/FLOORS
31	PREPARE, LABEL AND SEND CULTURE SPECIMENS TO LABORATORY
32	PREPARE, LABEL AND SEND ROUTINE SPECIMENS E.G. URINE, BLOOD TO LABORATORY
33	PREPARE, LABEL AND SEND BIOPSY SPECIMENS TO LABORATORY
34	CHECK URINE FOR ACETONE/KETONE BODIES
35	COLLECT BLOOD BY VENIPUNCTURE
36	DETERMINE CO2 CONTENT OF BLOOD/PLASMA
37	DETERMINE O2 CONTENT OF BLOOD/PLASMA
38	DETERMINE BICARBONATE CONCENTRATION
39	CALCULATE CO2 CAPACITY OF PLASMA
40	CALCULATE O2 CAPACITY OF HEMOGLOBIN
41	CALCULATE BLOOD VOLUMES FROM VALUES OBTAINED THROUGH DYE DILUTION STUDIES
42	DO DIRECT MEASUREMENT OF BLOOD PO2
43	DO DIRECT MEASUREMENT OF BLOOD PCO2
44	CALCULATE PERCENT O2 SATURATION OF BLOOD
45	CALCULATE ACID/BASE EXCESS/DEFICITS
46	CALCULATE PCO2 USING A NOMOGRAM
47	DETERMINE OXYGEN SATURATION USING OPTICAL DENSITY MEASUREMENTS
48	CONSTRUCT CATHETERS FOR SPECIAL X-RAY EXAMINATIONS
49	MODIFY FLYING-DIVING CLOTHING AND EQUIPMENT
50	PREPARE SIZE SCALES FOR SPECIAL CLOTHING

TURN PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 10 OF RESPONSE BOOKLET
1	MAKE/USE SKIN CLIP ELECTRODES FOR RESEARCH ANIMALS
2	CONSTRUCT ELECTRODES
3	MAKE BENITITE PASTE
4	SHARPEN/HONE SURGICAL INSTRUMENT
5	CONSTRUCT PARTS FOR Q AND J CIRCLE SYSTEMS
6	DEMONSTRATE NEW EQUIPMENT OR PRODUCTS TO STUDENTS/STAFF
7	MAINTAIN RECORD OF TRAINEE'S EXPERIENCE IN OJT PROGRAM, E.G. COURSES , PRACTICAL EXPERIENCE
8	PREPARE CLASS RECORDS
9	SUPERVISE/DIRECT UNITS'S OJT PROGRAM
10	PREPARE STATEMENTS OF COURSE OBJECTIVES
11	EVALUATE EFFECTIVENESS OF UNIT'S OJT PROGRAM
12	SUGGEST IMPROVEMENTS FOR COURSE/CURRICULUM CONTENT
13	DESIGN IN-SERVICE TRAINING COURSES
14	PLAN CONTENT FOR OJT PROGRAM
15	WRITE LESSON PLANS
16	CONDUCT SEMINARS
17	ADMINISTER EXAMINATIONS
18	PERFORM CLASSROOM DEMONSTRATIONS
19	CONDUCT IN-SERVICE TRAINING COURSES
20	DRAW UP STUDENT COURSE ASSIGNMENTS
21	CHECK INDIVIDUAL'S PROGRESS DURING OJT
22	COMPUTE TEST GRADES
23	COMPOSE STUDENT EVALUATION REPORT
24	ASSIGN GRADES FOR INDIVIDUAL PERFORMANCE
25	EVALUATE STUDENTS PERFORMANCE/PROGRESS

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 10 OF RESPONSE BOOKLET
26	GIVE FIRST AID INSTRUCTION
27	INSTRUCT NON-MEDICAL PERSONNEL IN HEALTH SUBJECTS
28	LECTURE/ORIENT PERSONNEL ON DENTAL CARE AND HYGIENE
29	ARRANGE FOR HOUSEKEEPING/CLEANLINESS OF AREA
30	CHANGE LINENS, E.G. BED, EXAM TABLES, BEDSIDE CURTAIN
31	DO HOUSEKEEPING/CLEANING DUTIES
32	CLEAN AND DISINFECT WORKING AREA
33	PACK/WRAP ALL EQUIPMENT/SUPPLIES/REFUSE FROM ISOLATION UNITS BEFORE REMOVAL
34	INSPECT SWIMMING POOL AND BATHHOUSE
35	INSPECT TOILETS AND WASHROOMS
36	INSPECT FOR AVAILABILITY AND USE OF SAFETY EQUIPMENT IN HAZARDOUS AREAS
37	INSPECT FOR USE OF PROTECTIVE CLOTHING IN OCCUPATIONALLY HAZARDOUS AREAS
38	PERFORM IN-FLIGHT TESTS FOR FUMES AND NOISE LEVEL
39	INVESTIGATE AIRCRAFT ACCIDENTS/INCIDENTS FOR OXYGEN SYSTEM MALFUNCTIONS
40	SPECIFY CLOTHING REQUIRED FOR PROTECTION FROM EQUIPMENT AND ENVIRONMENTAL HAZARDS
41	INSPECT BREATHING MASKS (OXYGEN OR GAS) FOR MALFUNCTION
42	CHECK COMPRESSED GAS TANKS FOR LEAK, E.G. OXYGEN
43	SCREEN FOR ARTICLES FORBIDDEN IN HYPOBARIC/HYPERBARIC CHAMBER
44	REVIEW RADIATION EXPOSURE REPORTS
45	INVESTIGATE CASES OR REPORTS OF OVEREXPOSURES TO RADIATION
46	INSPECT WORKING AREAS TO ENSURE THEY MEET INDUSTRIAL HYGIENE SPECIFICATIONS
47	REVIEW AND EVALUATE ASEPTIC TECHNIQUES
48	CHECK EQUIPMENT FOR ELECTRICAL HAZARDS AND GROUNDS
49	DO PERIODIC MECHANICAL SAFETY CHECKS ON POWER OPERATED EQUIPMENT
50	ESTABLISH LIAISON WITH CIVILIAN SPECIALISTS/CONSULTANTS

TURN PAGE

LEFT PAGE 11 BIOTRONICS TASK BOOKLET

NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 11 OF RESPONSE BOOKLET
1	COORDINATE IPPB TREATMENTS
2	CUT AND MOUNT ECG STRIPS
3	PLAN FOR OVERTIME/LEAVE/LIBERTY/TIME OFF
4	LOG X-RAY NUMBERS OR IDENTIFICATION ON TO RECORDS
5	MAINTAIN DAILY RECORDS ON PATIENT PROCEDURES/EXAMINATIONS PERFORMED
6	MAINTAIN CALL LIST TO FILL BROKEN/CANCELLED APPOINTMENTS
7	PREPARE RADIOGRAPHS FOR VIEWING BY DOCTOR
8	REPORT INFECTIONS TO INFECTION COMMITTEE
9	REVIEW AND FOLLOW THROUGH ON COMPLETED CONSULT REPORTS
10	INFORM DOCTOR OF ANY CONTRAINDICATIONS TO STUDY
11	LOG NUMBER OF X-RAY EXPOSURES MADE ON EACH PATIENT
12	DETERMINE ADEQUACY OF STERILIZATION PROCEDURES
13	SCHEDULE APPOINTMENTS FOR CLINIC/DEPARTMENT, E.G., MAINTAIN APPOINTMENT BOOK
14	REPLACE FAULTY EEG ELECTRODES DURING COURSE OF TEST
15	PICK UP PATIENTS DOCUMENTS FROM FILE
16	ADVISE/GIVE ASSISTANCE IN NURSING CARE PLANNING/DIRECTING, E.G. PATIENT HANDLING/SEPARATION
17	DEVELOP IMPROVED WORK METHODS AND PROCEDURES
18	NOTIFY NEXT-OF-KIN WHEN REQUIRED
19	OBTAIN CONSENTS FOR PROCEDURES/AUTOPSY
20	MAINTAIN MEDICAL/DENTAL RECORDS
21	ARRANGE TRANSPORTATION FOR PATIENTS/PERSONNEL
22	ARRANGE FOR SPECIAL OR LATE MEALS FOR PATIENTS/VISITOR/STAFF
23	LOCATE MISPLACED CHARTS/HEALTH RECORDS
24	MAKE ENTRIES ONTO ANESTHESIA RECORD
25	MAINTAIN PATIENT REGISTER

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 11 OF RESPONSE BOOKLET
26	PREPARE REPORT/FEEDER REPORT ON NUMBERS OF INPATIENT/OUTPATIENT SERVICES PERFORMED
27	PREPARE PERSONAL EFFECTS REPORT/REQUIRED DOCUMENT/PAPERWORK WHEN DEATH OCCURS
28	PREPARE NOMINAL INDEX CARDS ON INCOMING PATIENTS
29	CHECK PATIENTS CHART/HEALTH RECORD FOR COMPLETENESS OF FORMS/ REPORTS/RECORDS
30	ARRANGE FOR/FOLLOW UP COMPLETION OF CLINICAL LABORATORY TEST
31	LOG IN PATIENTS TO CLINIC/DEPARTMENT/SICK CALL
32	PERFORM DUTIES OF PUBLIC RELATIONS REPRESENTATIVE FOR DEPARTMENT/UNIT
33	BRIEF THE COMMANDING OFFICER
34	MAINTAIN X-RAY FILM LIBRARY/FILE
35	SORT EEG TRACINGS FOR FILING
36	MAINTAIN EEG FILE/LIBRARY
37	ENSURE THAT SAFE INDUSTRIAL PRACTICES ARE ADHERED TO, E.G. USE OF PROTECTIVE EYE GLASSES
38	COORDINATE WITH ADMIN STAFF OF BASE/UNIT REGARDING POLICIES AFFECTING STAFF
39	ORGANIZE AND MAINTAIN WATCH, QUARTER AND STATION BILL
40	ADJUST DAILY ASSIGNMENT SHEET/WORK SCHEDULE AS NEEDED
41	ASSIGN PERSONNEL TO DUTIES/WORK ACCORDING TO SCHEDULE
42	MAINTAIN DUTY/CALL/EMERGENCY RECALL ROSTER
43	COMPILE/UPDATE MAILING/ADDRESS LIST
44	SEAT PERSONNEL AND ALLOCATE NUMBER IN CHAMBER
45	CHECK/CORRECT CALCULATIONS PERFORMED BY OTHER TECHNICIANS
46	CHECK PERSONNEL FOR REQUIRED ATTIRE FOR ENTRY/EXIT FROM DEPARTMENT
47	ASSIGN PERSONNEL TO DEPARTMENTS, AREAS, I.E. FOR COMMAND
48	MAINTAIN ATTENDANCE RECORDS
49	PLAN AVAILABILITY OF RECRUITS FOR ASSIGNMENTS AFTER TRAINING
50	CHECK PRESSURIZED TANKS FOR QUANTITY OF GAS, E.G. OXYGEN, HELIUM

TURN PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 12 OF RESPONSE BOOKLET
1	TRANSPORT LAUNDRY TO/FROM LAUNDRY ROOM
2	DETERMINE IF EQUIPMENT NEEDS REPAIR/SERVICE
3	DISPOSE OF SUPPLIES/INSTRUMENTS/EQUIPMENT AFTER TIME LIMIT/ EXPIRATION DATE
4	DO FOLDING, WRAPPING AND STORING OF LAUNDRY/LINEN
5	INSPECT THAT SUPPLIES/MATERIALS/EQUIPMENT ARE STORED PROPERLY
6	INSPECT CONDITION OF FILM STORAGE AREAS, I.E. FOR PROPER TEMPERATURE/LIGHT/HUMIDITY
7	INSPECT SUPPLIES/EQUIPMENT FOR ACCEPTABILITY/DAMAGE/LOSS/ PILFERAGE
8	ISSUE SUPPLIES/INSTRUMENTS/EQUIPMENT/MATERIALS
9	MAINTAIN STOCK OF STERILE SUPPLIES
10	MAINTAIN UNIT/WARD/SECTION FIRST AID AND EMERGENCY EQUIPMENT
11	DISPOSE OF BLOOD AFTER TIME LIMIT/EXPIRATION DATE
12	MAINTAIN STOCK OF CHEMICAL SOLUTIONS
13	MAKE UP STERILE TRAYS
14	TRANSPORT STERILE EQUIPMENT/SUPPLIES, RETURN DIRTY OR EXPIRED ITEMS TO CENTPAL SUPPLY ROOM
15	PACK SURVIVAL SEAT PACKS
16	PICK UP/DELIVER EQUIPMENT
17	PREPARE AND STERILIZE LINEN
18	PACKAGE (WRAP/DATE/LABEL) STERILE SUPPLIES
19	STORE SUPPLIES
20	STORE UNEXPOSED FILMS
21	STORE INSTRUMENTS
22	VERIFY/SIGN OFF ON REQUISITIONS/RECEIPTS FOR SUPPLIES/EQUIPMENT/ MATERIAL
23	VERIFY AND CO-SIGN INVENTORY
24	WASH GLASSWARE/INSTRUMENTS
25	PREPARE FILM PROCESSING CHEMICALS

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 12 OF RESPONSE BOOKLET
26	PREPARE PHOTODOSIMETRY FILM FOR SUBMISSION TO PROCESSING ACTIVITY
27	EVALUATE THE MAINTENANCE AND USE OF SUPPLIES, EQUIPMENT AND WORK SPACE
28	EVALUATE FLYING CLOTHING/ACCESSORIES
29	INSPECT X-RAY FILM QUALITY TO EVALUATE DEVELOPMENT TECHNIQUES
30	REVIEW/INSPECT X-RAY FILMS FOR DISPOSAL
31	DETERMINE METHOD OF STERILIZATION FOR INSTRUMENTS/EQUIPMENT
32	LAYOUT PARTS FOR AIR DRYING
33	DETERMINE/SELECT AGENTS/PROCESSES FOR EQUIPMENT/INSTRUMENT STERILIZATION
34	TEST AUTOCLAVE EFFECTIVENESS WITH CULTURE STRIPS
35	SELECT/SET UP INSTRUMENTS FOR SPECIAL SURGICAL PROCEDURE
36	SELECT/SET UP INSTRUMENTS FOR SMALL PACKS
37	BREAK DOWN SURGICAL INSTRUMENTS FOR POST OPERATIVE CLEANING
38	ESTABLISH SUPPLY USAGE RATE
39	UNPACK EQUIPMENT
40	DEVELOP MEDICAL X-RAY FILMS
41	MAKE CATHETERS FOR SPECIAL X-RAY EXAMINATIONS
42	CHECK INSTRUMENTS AND SUPPLIES FOR STERILIZATION INDICATORS
43	REPLENISH TESTING ROOM WITH SUPPLIES
44	MAINTAIN FOOD SUPPLY FOR RESEARCH ANIMAL
45	ARRANGE FOR REPLACEMENT/REPAIR OF EQUIPMENT AS REQUIRED
46	GIVE DIRECT SUPERVISION FOR THE PREPARATION OF REQUISITIONS/ PURCHASE ORDERS/WORK REQUESTS
47	COORDINATE ON EQUIPMENT LOANS, BORROWING OF MEDICAL/DENTAL SUPPLIES/TRAINING AIDS
48	COORDINATE WITH MANUFACTURERS/CONTRACTORS FOR EQUIPMENT REPAIR/ MAINTENANCE
49	SURVEY SUPPLIERS REGARDING COST OF EQUIPMENT/SUPPLIES
50	MAINTAIN A SET OF REFERENCE BOOKS/MANUALS/PUBLICATIONS

TURN PAGE

LEFT PAGE 13 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 13 OF RESPONSE BOOKLET
1	ESTABLISH/MAINTAIN SUTURE/INSTRUMENT TRAY CARDS
2	MAINTAIN A SUPPLY (EQUIPMENT, MATERIALS) INVENTORY SYSTEM
3	CHECK/LOCATE/IDENTIFY PART NUMBERS FROM CATALOGUES/MANUALS
4	MAKE LOCAL (OPEN) PURCHASE OF SUPPLIES
5	PREPARE REQUISITIONS FOR SUPPLIES/EQUIPMENT
6	REQUISITION FLIGHT CLOTHING
7	COORDINATE WITH OTHER SECTIONS FOR ASSISTANCE IN FABRICATING EQUIPMENT
8	PREPARE REQUISITIONS FOR DIAGNOSTIC PROCEDURES, E.G. LAB, EEG
9	CONFER/VISIT MANUFACTURERS/CONTRACTORS TO OBTAIN FIRST HAND KNOWLEDGE OF EQUIPMENT/SUPPLIES
10	ORDER SUPPLIES/EQUIPMENT THROUGH FEDERAL SUPPLY SYSTEM
11	MAINTAIN TUBES OF ALCOHOL FOR ELECTRODE STERILIZATION
12	DEVELOP PHOTOGRAPHIC FILM
13	CALIBRATE EQUIPMENT
14	STERILIZE NEEDLES
15	CLEAN ELECTRODES
16	ATTACH IDENTIFYING TAG TO COMPONENTS/EQUIPMENT
17	MAINTAIN STOCK OF SUPPLIES/MATERIALS/SPARE PARTS FOR UNIT
18	PREPARE NORMAL SALINE SOLUTION
19	MAINTAIN/ACCOUNT FOR BULK ALCOHOL
20	PREPARE CONDUCTIVE PASTES
21	MAINTAIN STOCK OF EXCESS EQUIPMENT
22	DO SUPPLY/EQUIPMENT INVENTORY
23	ROTATE INVENTORY
24	MODIFY EQUIPMENT FOR NON-STANDARD USAGE
25	DETERMINE EQUIPMENT/SUPPLIES FOR EMERGENCIES/EXERCISES

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 13 OF RESPONSE BOOKLET
26	DETERMINE IF REPAIR IS WITHIN UNIT CAPABILITIES
27	SUPERVISE ROUTINE EQUIPMENT MAINTENANCE FOR SECTION/UNIT
28	CONSULT ON CENTRAL/LOCAL SUPPLY PROBLEMS/PROCEDURES
29	NEGOTIATE WITH VENDORS,E.G. COST,DELIVERY SCHEDULE
30	MAINTAIN PROPERTY CUSTODY CARDS FOR EQUIPMENT
31	ASSIGN SPACE FOR EQUIPMENT AND SUPPLIES
32	MAINTAIN INSTRUMENT CALIBRATION FILES
33	RECEIVE AND PROCESS MATERIAL COMPLAINTS
34	RESEARCH LOCAL MEDICAL/DENTAL SUPPLY PURCHASE RATES
35	LOG PLANT PROPERTY IDENTIFICATION NUMBER AND CONDITION
36	LOG LOCAL PURCHASE INFORMATION
37	LOG RECOVERABLE INVOICE FORM
38	MAINTAIN A BACK ORDER FILE ON INDENTS
39	MAINTAIN LEDGER OF SUPPLY/STOCK, E.G., REQUISITIONS, COST ACCOUNTING
40	PREPARE INVENTORY REPORTS
41	REQUISITION TRAINING AIDS FROM OTHER HOSPITALS/CLINICS OR CIVILIAN/GOVERNMENT HEALTH FACILITIES
42	LOG BLANKET PURCHASE ORDER INVOICE NUMBERS
43	DRAFT OFFICIAL CORRESPONDENCE
44	REVIEW REPORTS/REQUESTS FOR PROPER PREPARATION AND COMPLETION
45	ANSWER TELEPHONE/TAKE MESSAGES, MEMOS
46	CALCULATE LAB/DIAGNOSTIC TEST RESULTS
47	LOG ANALYSIS RESULTS
48	PREPARE NECESSARY PAPERWORK TO UPDATE ORGANIZATION CHARTS
49	PREPARE PAPERWORK FOR RETURN OF DAMAGED MATERIALS/SUPPLIES/ EQUIPMENT
50	PREPARE WORK ORDERS/WORK REQUESTS

TURN PAGE

LEFT PAGE 14 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 14 OF RESPONSE BOOKLET
1	RELIEVE OTHERS FOR LUNCH/COFFEE BREAKS
2	PREPARE REQUEST FORM FOR PHOTOGRAPHIC/PRINTING SERVICES
3	TYPE
4	RESEARCH MATERIAL FOR PROJECTS, I.E. COMPILE STATISTICS, GATHER DATA FROM DIFFERENT SOURCES
5	AMEND CROSS REFERENCE LIST OF INSTRUCTIONS/MATERIALS
6	ARRANGE FOR BRIEFINGS
7	PERFORM ADMINISTRATIVE ERRANDS, E.G. PICK-UP PAYCHECKS, DELIVER/ RETURN TIME CARDS
8	ENTER PATIENT IDENTIFICATION INFORMATION ONTO REPORTS/RECORDS
9	MAINTAIN BLANK (STANDARD) FORMS CONTROL
10	MAINTAIN CARDEX FILE/SYSTEM
11	MAINTAIN NAVY DIRECTIVES ISSUANCE SYSTEM (INSTRUCTIONS AND NOTICES)
12	MAINTAIN LOG OF QUALITY CONTROL PROCEDURES
13	COMPILE STATISTICS NECESSARY TO MAKE REPORTS
14	MAINTAIN MODIFICATION RECORDS, E.G., EQUIPMENT, MEDICAL ALLOWANCE
15	PERFORM MATHEMATICAL CALCULATIONS
16	CHART/GRAPH DATA
17	CONDUCT TOURS OF FACILITY FOR VISITORS
18	CHECK CONSULTATION REQUESTS TO INSURE THE CORRECT STUDY IS TO BE CARRIED OUT
19	PREPARE ONE-TIME OR INFREQUENT REPORTS FOR REQUESTORS
20	COORDINATE STAFFING ARRANGEMENTS
21	LOG RUNNING EXPENSES/EXPENDITURE OF MONIES
22	COORDINATE WITH SCHOOL GUIDANCE DEPARTMENTS

GO TO PART IIB

Part II B

LIST OF INSTRUMENTS AND EQUIPMENT

LEFT PAGE 15 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 15 OF RESPONSE BOOKLET
1	HEARING AID KITS
2	LANCET, FINGER BLEEDING
3	EMERGENCY CART (CRASH CART)
4	MARITIME/INLAND/ARCTIC SURVIVAL KIT
5	WET SUIT
6	CHAMBER PRESSURE INDICATORS/GAUGES
7	LIQUID OXYGEN EQUIPMENT
8	FIELD POWER GENERATOR, PORTABLE
9	GNERATORS, EMERGENCY POWER, STATIONARY
10	ELECTRIC DESK CALCULATOR
11	PHOTOSTATIC EQUIPMENT
12	SLIDE/FILM STRIP/STILL PROJECTOR
13	TYPEWRITER
14	TELETYPE
15	LAMP ALCOHOL
16	EMERGENCY DRUG SUPPLY (KIT, BOX, DRAWER)
17	WATER BATH WITH THERMOSTAT
18	CLOTH CUTTING MACHINE
19	PRESSURE/RECOMPRESSION CHAMBER/HYPERBARIC CHAMBER
20	SCUBA EQU'PMENT (MARK 10, 11)
21	8 MM CAMERA
22	DIGITAL TAPE RECORDER
23	GOGGLES, DARK ADAPTATION
24	MANNEQUIN, ANTHROPOMETRIC
25	EAR OXIMETER AND COMPONENTS

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 15 OF RESPONSE BOOKLET
26	GODDART CONSTANT LOAD/VARIABLE SPEED ERGOMETER
27	INFRA RED LAMP
28	LIGHT INTENSITY METER
29	ULTRASONIC THERAPY UNIT
30	ELECTROENCEPHALOGRAPH (EEG) APPARATUS
31	STIMULATOR, NERVE
32	STROBOSCOPE
33	ELECTROMYOGRAPH (EMG) RECORDER
34	DYNOGRAPH
35	NEEDLE ELECTRODE
36	VENTILATOR, PRESSURE LIMITED
37	SPHYGMOMANOMETER (BLOOD PRESSURE APPARATUS)
38	CARDIAC ARREST TRAY/CART
39	DEFIBRILLATOR, INTERNAL
40	DEFIBRILLATOR COMPLETE WITH SCOPE SYNCHRONIZER
41	ELECTROCARDIOGRAPH (EKG) APPARATUS
42	RADIOELECTROCARDIOGRAPH (RKG)
43	ELECTRONIC CARDIAC MONITOR
44	PACEMAKER ELECTRODYNE AND MONITOR PM 65
45	II PACEMAKER ELECTRODYNE TRANSISTOR MODEL TR 3
46	PACEMAKER EXTERNAL
47	PACEMAKER INTERNAL
48	PHONOCARDIOGRAPH WITH COMPONENTS
49	VECTORCARDIOGRAPH UNIT
50	HEART-LUNG MACHINE

TURN PAGE

LEFT PAGE 16 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 16 OF RESPONSE BOOKLET
1	BECKMAN CARDIO DENSITOMETER
2	GILRD CARDIAC OUTPUT COMPUTER COMPLETE WITH DENSITOMETER
3	DEFIBRILLATOR, PORTABLE
4	PIPET
5	RECORDING AMPLIFIER
6	ANALYTICAL BALANCE
7	CENTRIFUGE, LABORATORY (FLOOR MODEL)
8	CO2 ANALYZER
9	GAS CHROMATOGRAPH
10	INCUBATORS LABORATORY
11	MICRO-ASTRUP APPARATUS FOR BLOOD PO2 ANALYSIS
12	NITROGEN ANALYZER
13	PH METER
14	PAPER CHROMATOGRAPHY APPARATUS
15	DENSITOMETER WITH WRITER/RECORDER
16	SCHOLANDER MICRO GAS ANALYSER
17	CORNING BLOOD GAS ANALYZER
18	RADIOMETER GAS ANALYZER
19	IL BLOOD GAS ANALYZER
20	STOP WATCH
21	MANOMETRIC GAS ANALYZER, E.G. VAN SLYKE, WARBURG
22	CENTRIFUGE, CLINICAL (TABLE MODEL)
23	ELECTRICIAN'S TOOL BOX
24	MICROMETER
25	VISE, BENCH

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 16 OF RESPONSE BOOKLET
26	MOVIE PROJECTOR/ACCESSORIES
27	AUDIO TAPE RECORDERS
28	OSCILLOSCOPE
29	CAMERA, TELEVISION
30	ELECTRIC SOLDERING GUN
31	SOLDERING EQUIPMENT
32	COMPUTER OF AVERAGE TRANSIENTS (CAT)
33	CONTINUITY TEST METER (OHMMETER)
34	CLOSE CIRCUIT TV SYSTEM
35	HORIZONTAL ACCELERATION SLED
36	POWER SUPPLY UNIT
37	IMPLANTED ELECTRODE
38	DIGI-BIT LOGIC UNIT
39	ELECTRONIC COUNTER
40	WALKER, CRESCENT, ADJUSTABLE WRENCH
41	AMBU BAG (HOPE BAG)
42	ATOMIZER
43	HUMIDIFIERS
44	INHALATOR-ASPIRATOR (RESUSCITATOR)
45	DRUM KYMOGRAPH
46	OXYGEN ANALYZER
47	FLOW METER
48	OXYGEN REGULATOR/FLOWMETER
49	PORTABLE IRON LUNG
50	RESPIRATOR, BENNETT

TURN PAGE

LEFT PAGE 17 BIOTRONICS TASK BOOKLET

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 17 OF RESPONSE BOOKLET
1	RESPIRATOR BIRD
2	RESPIRATOR, EMERSON
3	RESSUSSE-ANNE
4	SPIROMETER
5	TREADMILL
6	ASPIRATOR, PORTABLE
7	CYSTOSCOPE, UNIVERSAL
8	ULTRASONIC NEBULIZER
9	VENTI MASKS (24%, 28%, 35%)
10	MIXING VALVE (SCUBA)
11	RESPIROMETER, WRIGHT
12	AIRWAYS
13	ENDOTRACHEAL TUBE
14	Q & J CIRCLE
15	SYRINGE/NEEDLES
16	OXYGEN CATHETERS
17	OXYGEN CYLINDER/TANK, PORTABLE
18	OXYGEN TENT
19	HYPO-HYPER-THERMIA MACHINE
20	HYPOTHERMIA MACHINE
21	ISOLETTE
22	INSTRUMENT WASHER-STERILIZER
23	AUTOCLAVE, GAS
24	AUTOCLAVE, STEAM
25	MACHINE, FLOOR POLISHING

GO TO RIGHT HAND PAGE

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 17 OF RESPONSE BOOKLET
26	GURNEY CARTS
27	OXYGEN MASK
28	PROCESSING MACHINE, X-RAY FILM, AUTOMATIC
29	TRAY, CARDIAC ANGIOGRAM
30	TRAY, CARDIAC AORTOGRAM
31	FILM BADGE
32	X-RAY DEVELOPER, MANUAL, DRY PROCESS
33	IMAGE INTENSIFIER, FLUOROSCOPIC UNITS
34	RAPID FILM (ROLL) CHANGER
35	X-RAY, CONTROL CONSOLE
36	X-RAY, EQUIPMENT POWER UNIT
37	X-RAY, FILM LIGHT PROOF STORAGE CABINET
38	CALIPER
39	COMPRESSED AIR CYCLINDER/TANK
40	COMPRESSED GAS TANKS/CYLINDERS (OTHER THAN OXYGEN)
41	HEMOSTATS
42	TRAY, OPERATING ROOM PREP
43	INSTRUMENT TRAY, MINOR SURGERY
44	IRIS FORCEPS
45	DISSECTING INSTRUMENTS
46	RONGEUR, BONE
47	SPONGES, SURGICAL (RADIOPAQUE)

END OF TASK BOOKLET